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10/082,094

02/26/2002

Shinichi Ogimoto

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09/22/2004

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EXAMINER

NGUYEN, DONGHAI D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/082,094

Applicant(s)

OGIMOTO, SHINICHI

Examiner

Donghai D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004 and 14 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-14, 17, 18 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15, 16 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Election/Restrictions***

1. Applicant's election with traverse of Species A (Claims 1-7, 15-16, and 19) in the reply filed on July 06, 2004 is acknowledged. The traversal is on the grounds that the Examiner fails to point out the inventions are independent or distinct, fails to address whether the pending claims recite mutually exclusive characteristics and there is no serious burden on the examiner to search and exam the entire application. These are not found persuasive because: First of all in the last Office Action, the Examiner has pointed out the claimed inventions are distinct as **Species A and B** which drawn to Figs. 9 and 15 respectively, secondly the pending claims are mutually exclusive since the **Species A** does not having the "vacuum chucking part ... straight line traversing... electronic component" (claim 8, lines 12-13, also on claims 17 and 20) and **Species B** does not require the "vacuum chucking part ... straight line parallel... electronic component" (claim 1, lines 12-13, also on claims 15 and 19). Finally, since the claimed inventions are distinct and mutually exclusive it would place a serious burden on the Examiner to search and exam the entire application.

The requirement is still deemed proper and is therefore made FINAL.

***Drawings***

2. Figures 1-3, 5, and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header

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(as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "81c" in fig. 18. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

4. The abstract of the disclosure is objected to because the claimed invention is directed to species A. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 1-7 and 15, 16, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "a light path part... positioning mark" (claim 1, lines 8-9; claim 15, lines 24-25; and claim 19, lines 19-20) is vague and indefinite since it is unclear as to where the light path part is located/formed and/or how it is formed and/or whether the light path part or the positioning mark is formed in the terminal part.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 1, 15, and 19 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant Admitted Prior Art (AAPA).

Regarding claim 1, AAPA discloses an electronic component holding head (81) for holding an electronic component (9) to be mounted to a substrate (2), comprising: a main electronic component holding unit (81, 82, 82a, etc.); a vacuum chucking part (81a-c) provided on said main electronic component holding unit so as to face the surface of the electronic component to be held by vacuum chucking, so that the electronic component is held by vacuum chucking to said main electronic component holding unit (Figs. 5-7); and a light path part (88)

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configure to guide light shined onto a positioning mark (91b) formed in a terminal part (91a) of the electronic component (9) to correcting a position offset between the electronic component and a substrate to which the electronic component is to be mounted (Fig. 5), wherein said vacuum chucking part (81) holds the electronic component at a position which is on straight lines substantially parallel to an edge of the electronic component and substantially mutually orthogonal on or over the positioning mark of the electronic component, and which avoids the positioning mark (Fig. 4 note that the light ray, arrow, comes from light source 88 is parallel to the edge of the electrical component).

Regarding claims 15 and 19, AAPA discloses an electronic component mounting apparatus and method for mounting an electronic component onto a substrate, comprising: an electronic component feeding unit, which feeds an electronic component (85); an electronic component holding head (81), which holds the electronic component to be mounted onto a substrate; an imaging unit (87), which forms an image of a positioning mark formed at a terminal part of the electronic component held by said electronic component holding head, for correcting a position offset between the electronic component and the substrate to which the electronic component is to be mounted; a position offset detection unit (86), which detects a position offset of the electronic component relative to the substrate, based on image data of the positioning mark obtained by said imaging unit; a position correction unit (83, 89) which, based on the position offset detected by said position offset detection unit, performs control so as to correct the X direction and the Y direction position offset of the electronic component relative to the substrate, so that the electronic component with the thus corrected position offset is mounted to the substrate, wherein said electronic component holding head includes: a main electronic

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component holding unit (81, 82, 82a, etc.); a vacuum chucking part (81a-c) provided on said main electronic component holding unit so as to face the surface of the electronic component to be held by vacuum chucking, so that the electronic component is held by vacuum chucking to said main electronic component holding unit (Fig. 6); and a light path part (88), configured to guide light shined onto the positioning mark (91a) formed in a terminal part (91) of the electronic component to correcting a position offset between the electronic component and the substrate to which the electronic component is to be mounted (Fig. 5), wherein said vacuum chucking part holds the electronic component at a position which is on straight lines substantially parallel to an edge of the electronic component and substantially mutually orthogonal over the positioning mark of the electronic component, and which avoids the positioning mark (Fig. 4).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of US Patent No. 6,203,082 to Bendat et al.

Regarding claims 2, AAPA disclose a light source shines light toward the positioning mark formed on the electronic component held by said vacuum chucking part, via said light path part, except the light source provided on said main electronic component holding head. Bendat et al teaches the light source (Col. 1, lines 63-64) provides on the holding head (10) for picking

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up and accurately placing a device (Col. 2, lines 2-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify AAPA to have the light source provided on the holding head as taught by Bendat et al for picking up and accurately placing the work piece.

***Allowable Subject Matter***

11. Claims 3-7 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (703) 305-7859. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN



**PETER VO**  
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